

Split

Work Order ID 79921-2

79921

Page 1

Item ID: D4456-2

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Fwd Raingutter, RH

Start Date: 17/02/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 17/02/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: M C J

Date: 12/02/08 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4456	A								
100		0.00							
100	FLOW WATER JET								
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg								
60617632	Dwg Rev: <u>A</u>								
	Prog Rev: <u>A</u>								
	2-Deburr if necessary								
110		0.00							
110	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							
Quality Control									
120		0.00							
120	QC8- Inspect parts - second check								
QC	Memo	0.00							
Quality Control									

B12-2-29

(24)

B12-2-29

A20

count
(24)

5/12/29

Work Order ID 79921

February-08-12 9:23:29 AM

79921

Page 2

Item ID: D4456-2

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Fwd Raingutter, RH

Stop ***NS2***

Start Date: 17/02/2012 Start Qty: 20.00

20

Required Date: 17/02/2012 Req'd Qty: 20.00

20

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	NC BRAKE	0.00							
130									
Small Fab	Memo	0.00							
Small Fab	1- Form as per dwg using DT9788 2- After forming cut off tabs as per dwg								
140	QC5- Inspect part completeness to step on W/O	0.00							
140									
QC	Memo	0.00							
Quality Control									
144	Outsource process - Heat Treat	0.00							
144									
Outsource1	Memo	0.00							
Outsource process - Heat Treat									

(10) EF 12-03-15

(40)

CY 12/03/22 10

P.O. 16523

Work Order ID 79921

February-08-12 9:23:29 AM

79921

Page 3

Item ID: D4456-2

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Raingutter, RH

Stop

NS2

Start Date: 17/02/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 17/02/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

146

Receive & Inspect for Damage & Mat'l Certs

0.00

146

Packaging

Memo

0.00

Packaging

QC6 —————> 5/26/30

6/2/3/30 (10)

(40)

10 PR 1242.

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

0.00

Hand Finishing

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

Quality Control

10X 8m 12/04/06

Work Order: 79922

Part Number: 04456-2

Page 1 of 1

X	First Article	X	Prototype
---	---------------	---	-----------

Measured by: IB
Date: 12-2-14

Date: _____

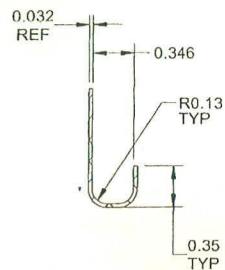
2000

FORMS: Quality Assurance (approved QAF) revD

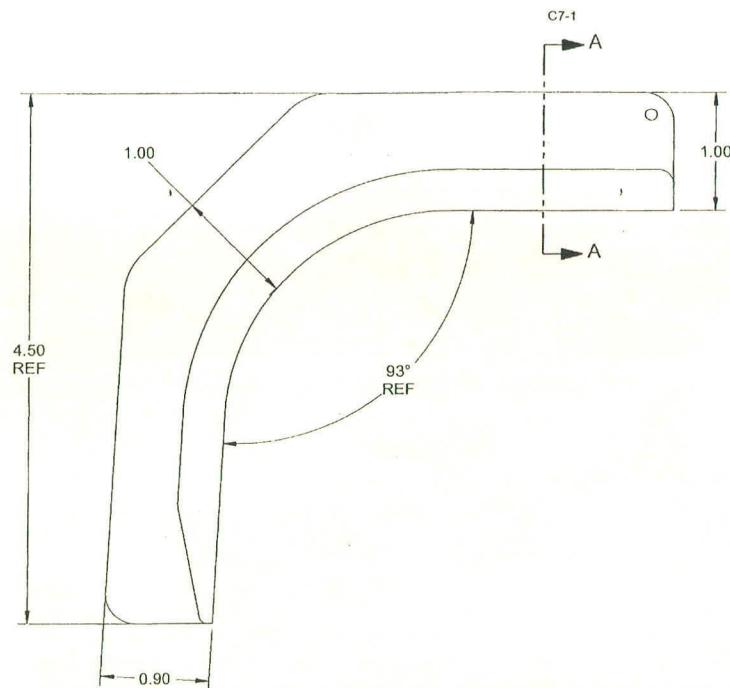
FIRST ARTICLE INSPECTION CHECKLIST

Measured by: <u>RB</u>	Audited by: <u>S</u>	Prototype Approval:
Date: <u>12-2-29</u>	Date: <u>12/2/29</u>	Date:

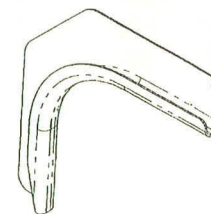
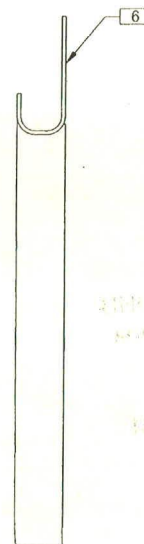
Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



SECTION A-A D4456-1



D4456-1 FWD RAINGUTTER, LH

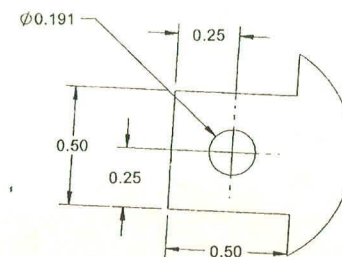
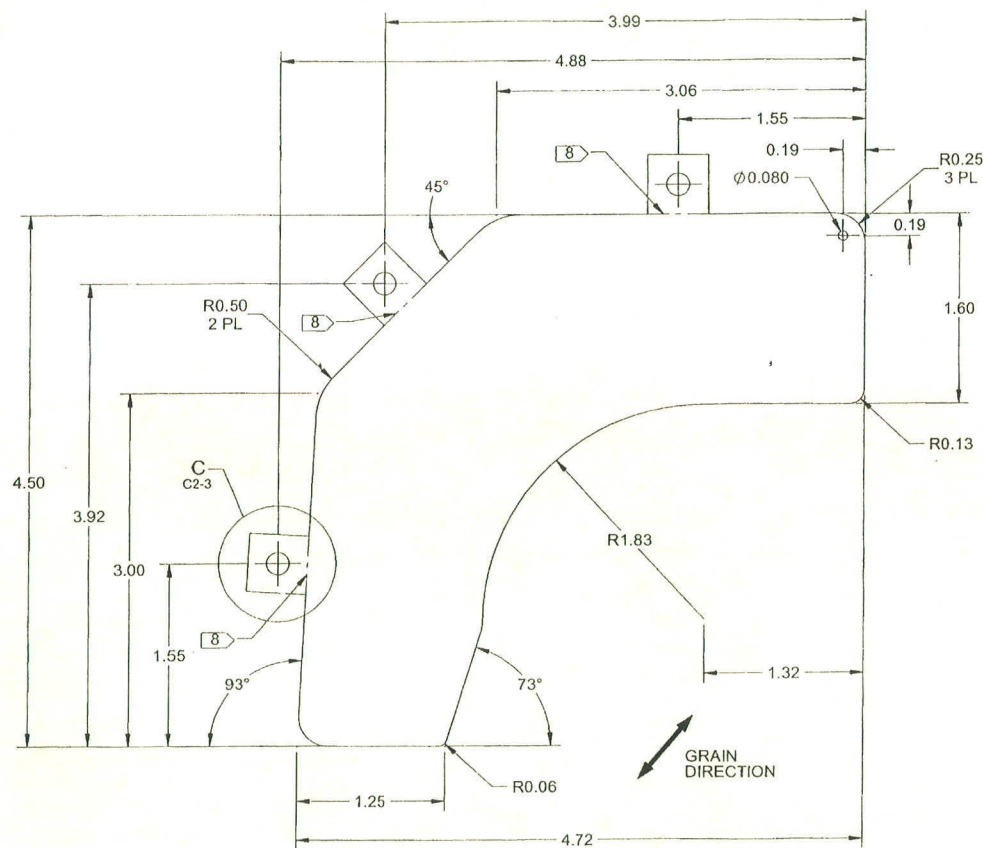


NOTES:

- 1) MATERIAL: MAKE FROM D4456-1F FLAT PATTERN
HEAT TREAT TO 6061-T6 CONDITION AFTER FORMING
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.04 lbs
- 8) TRIM TABS ON THE HIDDEN LINES AFTER FORMING

A		NEW ISSUE		RF		11.11.17	
REV.				DESCRIPTION		BY -- DATE	
DESIGN		RF		DART AEROSPACE USA, INC.			
DRAWN		RF		KENT, WA			
CHECKED				DRAWING NO.		REV. A	
MFG. APPR.				D4456		SHEET 1 OF 8	
APPROVED				TITLE		SCALE	
DE APPR.				RAINGUTTER		NTS	
DATE		11.11.17		COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>			

RELEASED
2012-01-17



DETAIL C
TYP C7-3
C6-3
D5-3

79921

0.032
REF

D4456-1F FWD RAINGUTTER FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-O ALUMINUM SHEET 0.032 THICK
PER AMS QQ-A-250/11 OR AMS 4025
REF DART SPEC M6061-OS.032
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.04 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KFMT, WA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4456	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		RAINGUTTER	NTS
DATE	11.11.17	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISS ON FROM DART AEROSPACE USA, INC.</small>	

Work Order ID 79921

79921

Page 4

February-08-12 9:23:29 AM

Item ID: D4456-2

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Fwd Raingutter, RH

Start Date: 17/02/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 17/02/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: Date:

Tooling:

Date:

Stop *NR2*

QC: Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170

Identify as per dwg & Stock Location: _____

0.00

170

Packaging

Memo

0.00

Packaging

12/4/2 54 100

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

MC 12/04/02

MC 12/04/02

Picklist Print

February-08-12 9:23:32 AM

Page 1

Work Order ID: 79921

79921

Parent Item: D4456-2

D4456-2

Parent Item Name: Fwd Raingutter, RH

Start Date: 17/02/2012

Required Date: 17/02/2012

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP REV:A 11.11.21 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M60610S.032		Purchased		No		100	sf	41.0000	0.125	2.631579			

M60610S 032

6061 0 SHEET .032

**

B12-2-14

Location

Loc Qty

Loc Code

MAT021

41

119686

41

6061.032 T.O.

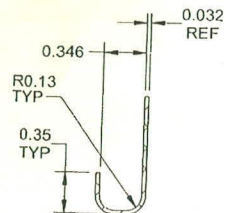
120777

~~120777~~

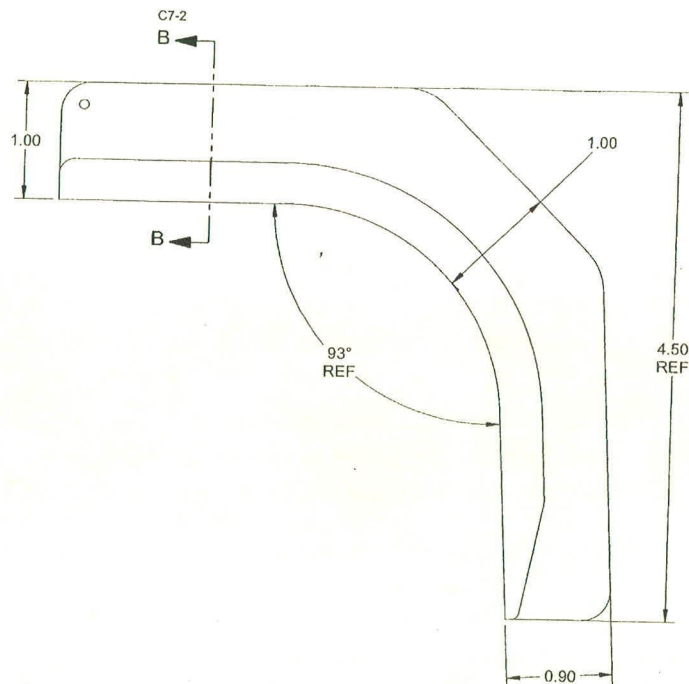
120777

~~120777~~

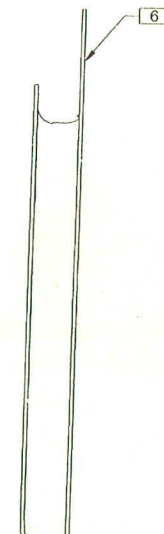
24



SECTION B-B D6-2



D4456-2 FWD RAINGUTTER, RH



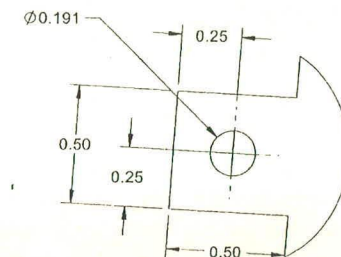
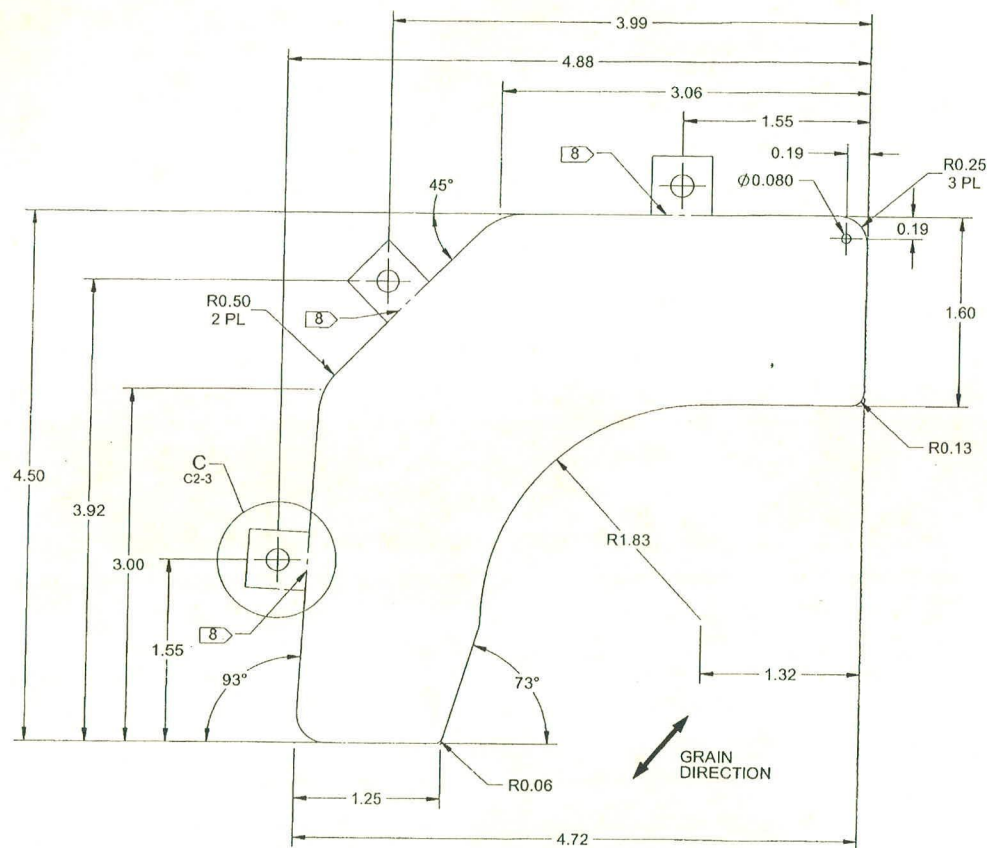
79921

RELEASED
2012-01-17

NOTES:

- 1) MATERIAL: MAKE FROM D4456-1F FLAT PATTERN
HEAT TREAT TO 6061-T6 CONDITION AFTER FORMING
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.03 lbs
- 8) TRIM TABS ON THE HIDDEN LINES AFTER FORMING

DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4456	SHEET 2 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	FWD RAINGUTTER, RH	1:1
DATE	11.11.17	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



DETAIL C
TYP
C7-3
C6-3
D5-3

79921

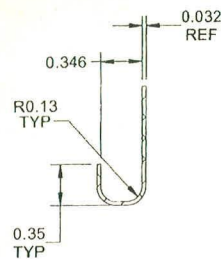
0.032
REF

D4456-1F FWD RAINGUTTER FLAT PATTERN

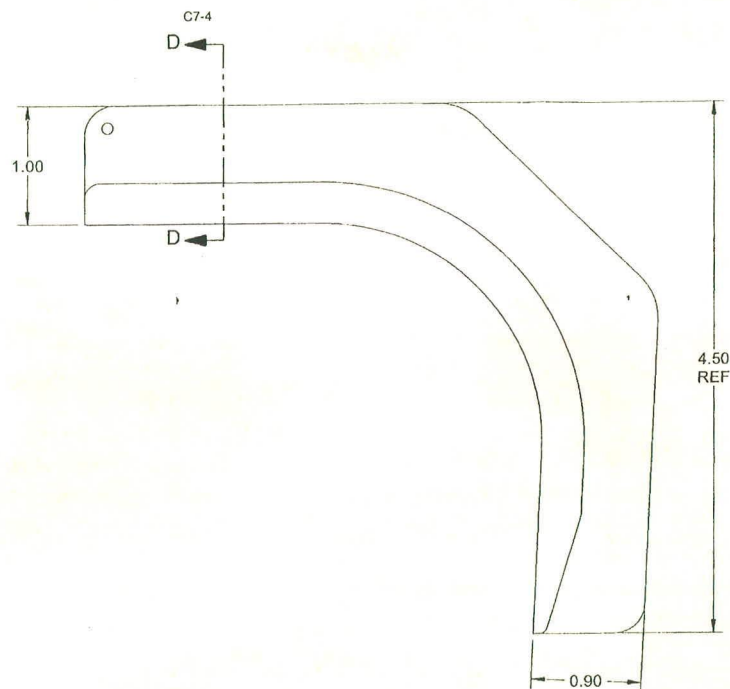
NOTES:

- 1) MATERIAL: 6061-O ALUMINUM SHEET 0.032 THICK
PER AMS QQ-A-250/11 OR AMS 4025
REF DART SPEC M6061-OS.032
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.04 lbs

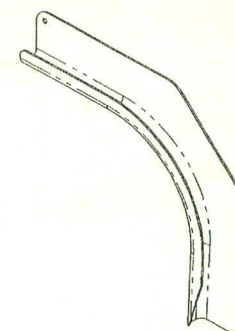
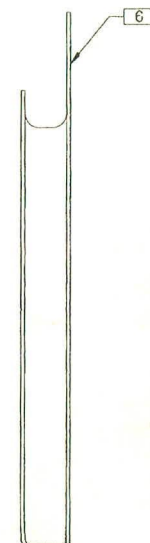
DESIGN	RF	DART AEROSPACE USA, INC. KEFNT, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. A
MFG. APPR.	RF	D4456	SHEET 3 OF 8
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	RAINGUTTER	NTS
DATE	11.11.17	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



SECTION D-D C6-4



D4456-3 AFT RAINGUTTER, LH



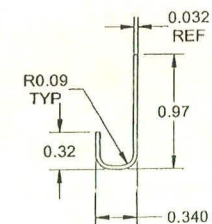
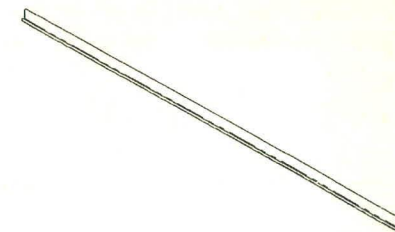
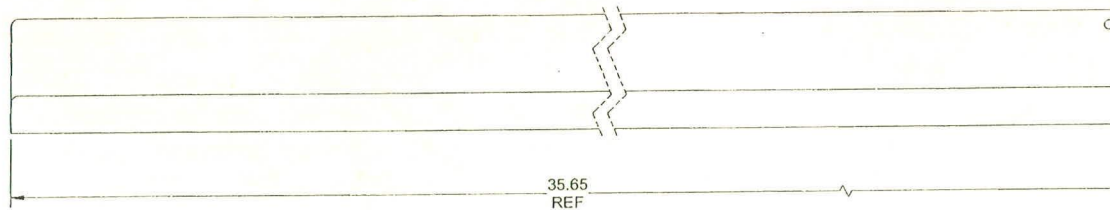
79921

RELEASED
2012-01-17

NOTES:

- 1) MATERIAL: MAKE FROM D4456-3F FLAT PATTERN
HEAT TREAT TO 6061-T6 CONDITION AFTER FORMING
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.04 lbs
- 8) TRIM TABS ON THE HIDDEN LINES AFTER FORMING

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4456	SHEET 4 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	RAINGUTTER	NTS
DATE	11.11.17	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



D4456-5 CENTER RAINGUTTER

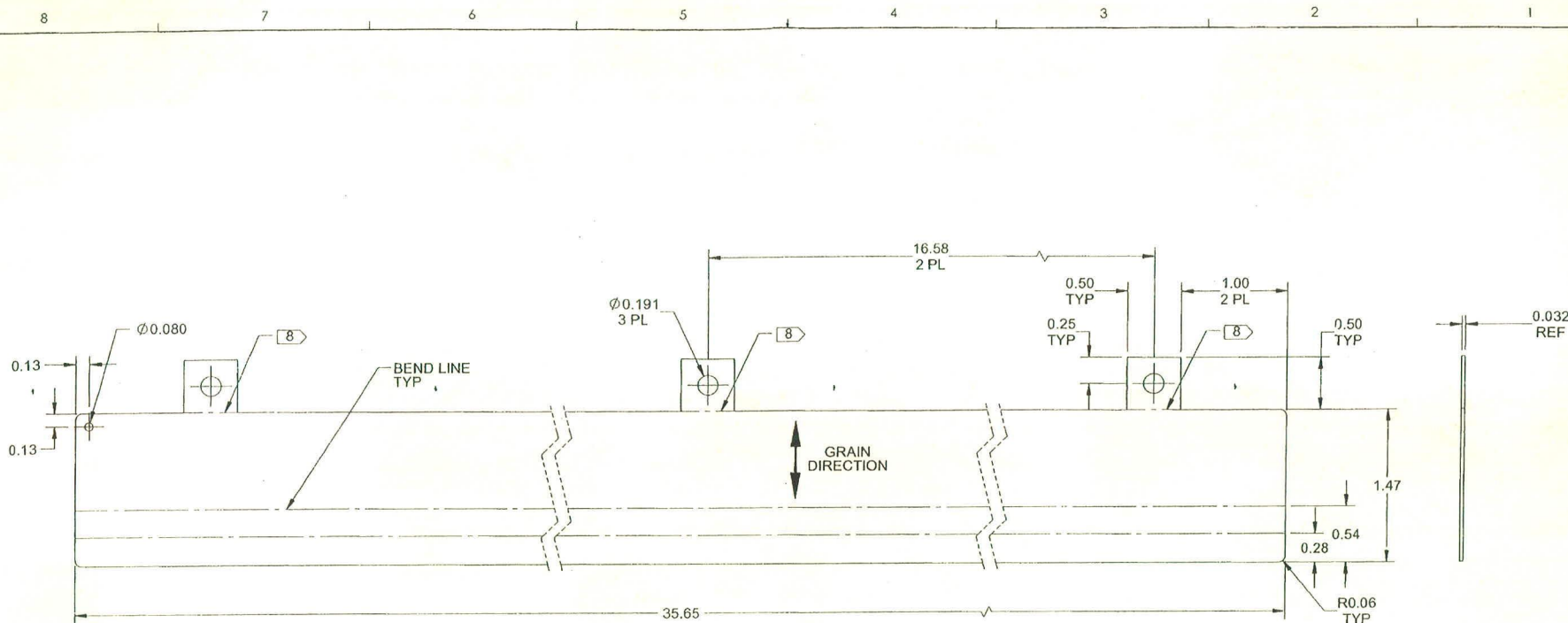
179921

2012-01-17

NOTES:

- 1) MATERIAL: MAKE FROM D4456-5F FLAT PATTERN
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.17 lbs
- 8) TRIM TABS ON THE HIDDEN LINES AFTER FORMING

DESIGN		RF		DART AEROSPACE USA, INC.	
DRAWN		RF		KENT, WA	
CHECKED		[Signature]		DRAWING NO.	REV. A
MFG. APPR.		[Signature]		D4456	SHEET 7 OF 8
APPROVED		[Signature]		TITLE	SCALE
DE APPR.		[Signature]		RAINGUTTER	NTS
DATE		11.11.17		COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



D4456-5F CENTER RAINGUTTER FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET 0.032 THICK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.032
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.17 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4456	SHEET 8 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	RAINGUTTER	NTS
DATE	11.11.17	<small>COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Recu de Livraison

Order	Shipper	Shipping Seq.
174695	1	59687

Shipped Complete

Customer **215**
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Shipped To:
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Purchase Order Number	Customer Shipper No.	Material Type	Order Date	Carrier
PO16523		AL-6061	2012/3/23	FEDEX
Quantity	Part No. / Part Name / Part Description			Pounds

60 D4456-1
(10) RAINGUTTER

(10) D4456-2 FWD
RAINGUTTER

(10) D4456-3 AFT
RAINGUTTER

(10) D4456-4 FWD
RAINGUTTER

(20) D4456-5 CENTER
RAINGUTTER

CONTENANT: 1 BOÎTE DE CARTON

Container Type	# Of Containers	Container Comments
BOITE DE CARTON	1	

PACKING	
----------------	--

Quantity Shipped: 60
Pounds Shipped: 5,00
Quantity Remaining: 0
Pounds Remaining: 0,00

Quantity Shipped: 60

Pounds Shipped: 5,00

Signature:

Date:

Shipped ON: 2012/03/28



Metcor Inc.
560, boul. Arthur-Sauvé
St-Eustache (Québec) J7R 5A8
Tél. : 450 473-1884
Télécopieur/Fax administration : 450 461-5443
Télécopieur/Fax production : 450 461-5443

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL ORDRE	CHARGEMENT APP
174686	1

CLIENT / client: 213

DART AEROSPACE

(273 ABERDEEN)

HAWKESBURY

ON K8A 1K7

LIVRE À / shipped to:

DART AEROSPACE

(273 ABERDEEN)

HAWKESBURY

ON K8A 1K7

NO. / customer no.	NO. DE LIVRE / customer shipper no.	MATÉRIEL (materials)	CODE DE TRAITEMENT (mat. heat code)	XL VERO DE LOT (lot number)
174686		AL-8081		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

EOL ANNEAL

SINGLE AGING TO CONDITION T8

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCTIVITÉ / HARDNESS	40 - 50 %ACS 85 HREW MIN	80 80	47 - 48 %ACS 91 - 93.5 HREW
			DURETÉ MESURÉE EN HR15T A1 = 78.3-83.3 HR15TW

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
80	5	D4458-1 (10) RAINGUTTER (10) D4458-2 FWD RAINGUTTER (10) D4458-3 AFT RAINGUTTER (10) D4458-4 FWD RAINGUTTER (20) D4458-5 CENTER RAINGUTTER CONTENANT: 1 BOÎTE DE CARTON

COMMENTAIRES / comments

Signature (METCOR)

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-ELUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Recu de Livraison

Order	Shipper	Shipping Seq.
174695	1	59687

Shipped Complete

Customer **215**
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Shipped To:
DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Purchase Order Number	Customer Shipper No.	Material Type	Order Date	Carrier
PO16523		AL-6061	2012/3/23	FEDEX
Quantity	Part No. / Part Name / Part Description			Pounds

60 D4456-1
(10) RAINGUTTER

(10) D4456-2 FWD
RAINGUTTER

(10) D4456-3 AFT
RAINGUTTER

(10) D4456-4 FWD
RAINGUTTER

(20) D4456-5 CENTER
RAINGUTTER

CONTENANT: 1 BOÎTE DE CARTON

Container Type	# Of Containers	Container Comments
BOITE DE CARTON	1	

PACKING	
----------------	--

Quantity Shipped: 60
Pounds Shipped: 5,00
Quantity Remaining: 0
Pounds Remaining: 0,00

Quantity Shipped: 60

Pounds Shipped: 5,00

Signature:

Date:

Shipped ON: 2012/03/28

